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ABSTRACT

One of a series of materials developed by Project APT (Administrators, Parents, and Teachers/Assessment, Programing, and Training), a program designed to foster home/school coordination in educational planning and program implementation for severely mentally retarded and/or multiply handicapped students: the booklet provides information on adaptive equipment for physically handicapped students. Sections describe adaptive equipment, such as bolsters and mats; offer general guidelines for the selection and use of wheelchairs; and list 13 books and publications on adaptive equipment (how to make it and where to buy it) as well as a list of 11 manufacturers who publish catalogs. (PHR)

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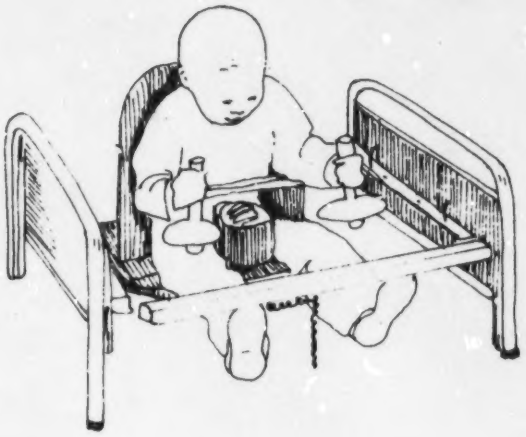
ADAPTIVE EQUIPMENT



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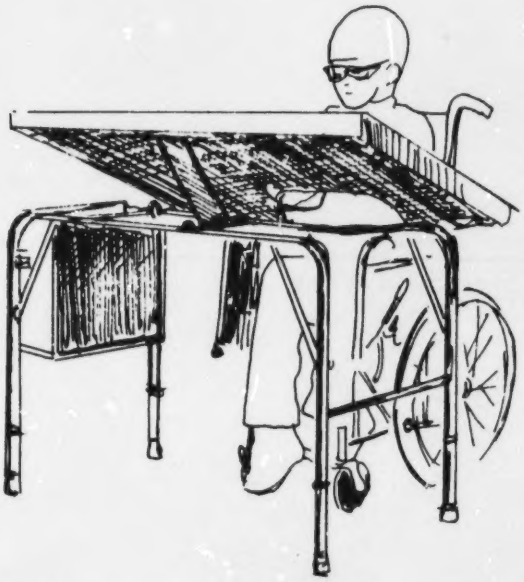


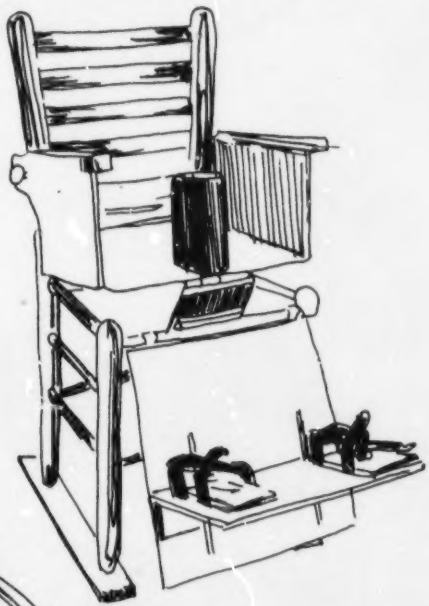
Adaptive equipment for physically handicapped students can be ordered from manufacturers who specialize in such equipment, or it can be homemade. The purpose of adaptive equipment is to safely enhance a student's functioning and to prevent any further disability or deformity. The equipment can be as simple as a built-up spoon or fork for improving eating or as complicated as an adapted chair or potty seat for improving sitting balance. Many of the best and most ingenious ideas come from parents who have had to adapt equipment at home without the benefit of formal training.

The following sections will describe some versatile pieces of equipment, offer general guidelines for the selection and use of wheelchairs, and list reference books that detail how to make specific pieces of equipment and a few manufacturers who publish catalogs.

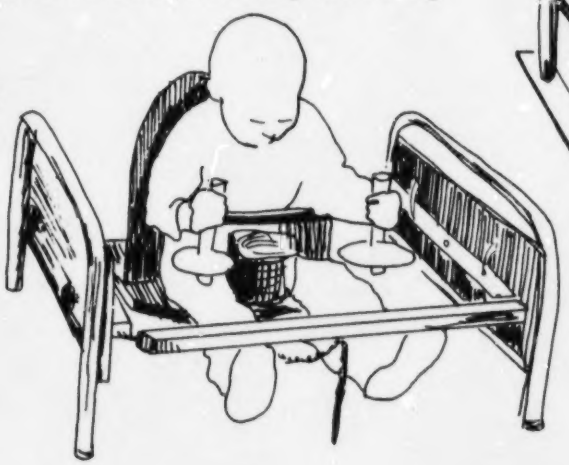
ADAPTIVE EQUIPMENT

Adaptive Equipment

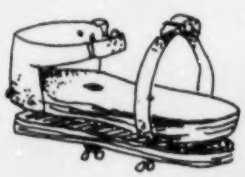
Everyone has his or her favorite pieces of adaptive and/or therapeutic equipment. Following is a list of some typical pieces of adaptive equipment that have been shown to be particularly helpful in working with physically involved students.

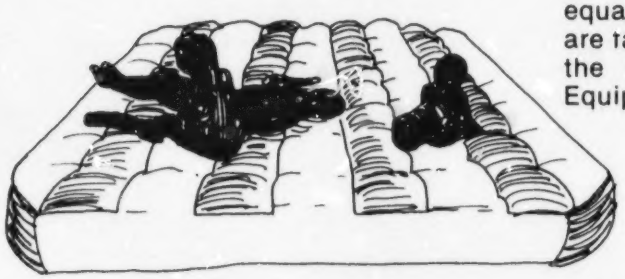


Adapted Chairs and Seats: These are usually recommended and/or constructed by a physical or occupational therapist to suit the individual child. Instructions for constructing various types of chairs can be found in books on how to make equipment. Wooden relaxation chairs are available from most manufacturers. Community Playthings has well-made adapted chairs in various sizes, including a corner floor sitter (similar to the triangle chair in Nancie Finnie's book, *Handling the Young Cerebral Palsy Child at Home*). Kay Products also has well-made adjustable corner and bolster chairs at reasonable prices.



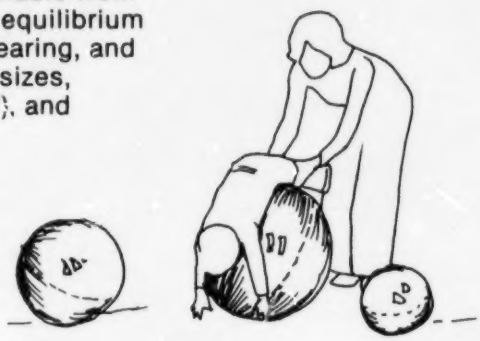
Adapted Tricycles: Adapted tricycles are available to assist physically involved students in using tricycles independently. You can also purchase separate trunk supports and special pedals to attach to regular tricycles and bicycles. Available from Preston.





Air-Flow Mats: Portable air-filled mats can be used equally well for relaxation and stimulation. These mats are fairly expensive pieces of equipment but well worth the investment. Available from Skill Development Equipment Company (SDE).

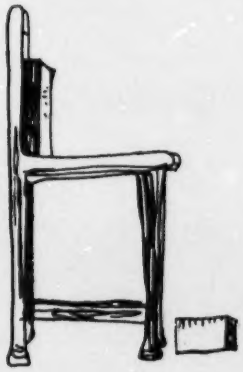
Balls: Balls of varying sizes are probably the most versatile pieces of equipment available. They can be used for relaxation, stimulation, improving equilibrium reactions, weight bearing, and many other activities. They can also be suspended from the ceiling for good eye-hand coordination activities. Preston carries a 36″ or 42″ inflated vinyl ball that is less expensive (but not as good) as SDE's handle balls. The Swiss gymnastic ball, available from most equipment suppliers, is excellent for practicing equilibrium reactions and improving sitting balance and weight bearing, and is useful for gross motor activities. It comes in three sizes, 42 cm. (approximately 17″), 53 cm. (approximately 21″), and 65 cm. (approximately 26″).



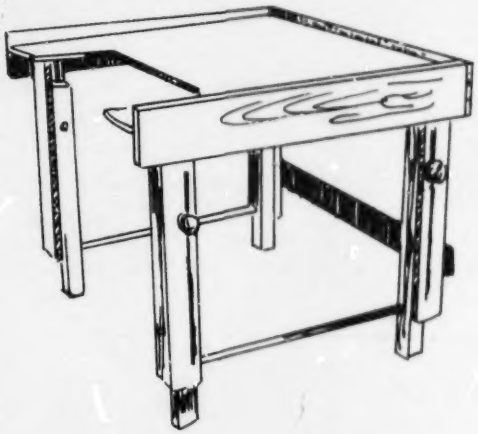
Bean Bag Chairs: These provide a relatively inexpensive way to acquire comfortable seating for some physically handicapped students. Modifications can be added by the use of pillows and sandbags.

Benches: Wooden benches of varying sizes are invaluable and can be easily made. They are particularly useful for practicing sitting balance or improving kneeling. Make sure the bench is the appropriate size for the child (it is important that the feet firmly touch the floor) or, if straddle sitting, that it is not too wide.

Blocks or Telephone Books: These afford an inexpensive way to make quick modifications to a chair. It is important that when a child sits in a chair, the feet are flat on the floor and hips are placed firmly against the back of the chair. Blocks or a telephone book can be placed under the feet or behind the back to accomplish this.

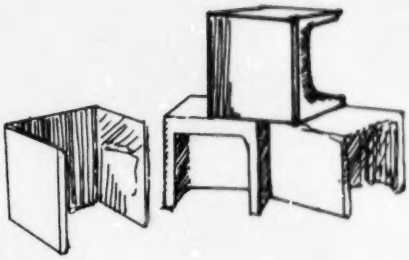


Bolsters: These can be used to position a child prone (see wedges). They are also good for practicing sitting balance, straddle sitting, improving weight bearing on hands, and facilitating equilibrium reactions. Bolsters can be homemade—sonotubes, which are forms for concrete construction, can be covered with foam and then vinyl. They are also available commercially. Bolsters whose height from the floor can be adjusted are available from Community Playthings. Soft foam-filled bolsters are available from SDE in the form of their Jousters and Spot Trainers. These are very popular with most therapists.



Cut-Out Tables: These adjustable tables allow students, particularly those in wheelchairs, to sit close to the work area. They are available with one or more cut-outs.

Dycem: Dycem is a non-slip plastic which can be used under plates, bowls, etc., to help hold equipment during feeding. Available from Sammons.



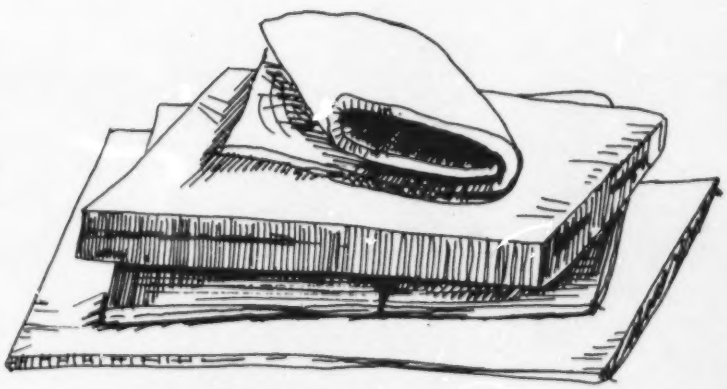
Educubes: These are very versatile plastic cubes that can be used as desks, surfaces to play on while practicing kneeling, or chairs (they can be used upright or turned upside down so that the seat is closer to the floor for smaller children). Available from Beckley-Cardy Company.

Hammocks: An inexpensive string-type hammock *securely* suspended from the ceiling has many advantages. Lined with soft pillows or bean bags, it can provide hours of soothing relaxation for "tight" or excitable students. Hammocks can also provide good vestibular stimulation that can be controlled either by the student or the teacher. A good source for this piece of equipment is your local sporting goods store.

Inflatables: Plastic blow-up inflatables come in various sizes. They are fun for students to roll on and provide gentle vestibular stimulation while promoting equilibrium reactions.
Available from Preston and Sammons.

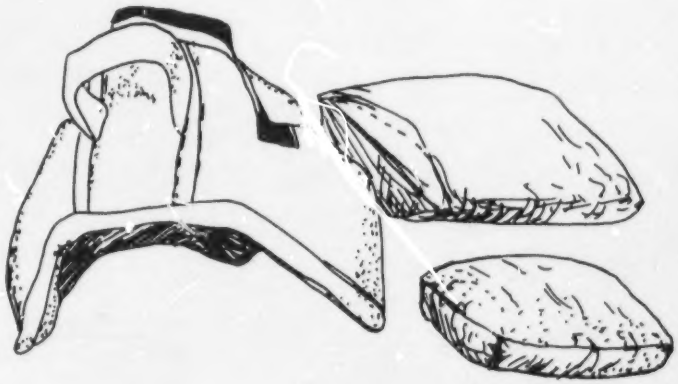
Inner Tubes: Inner tubes can be used for a variety of gross motor activities—walking on, bouncing on, jumping over, etc. Small inner tubes can also provide good support for students with poor sitting balance who can sit in the middle of the tube.

Mats: If you are working with students on a floor, a sturdy, dense mat is essential. Some are hinged in the middle for ease of portability and storage. Others may be in the shape of a large wedge (incline mat). Available from most manufacturers.

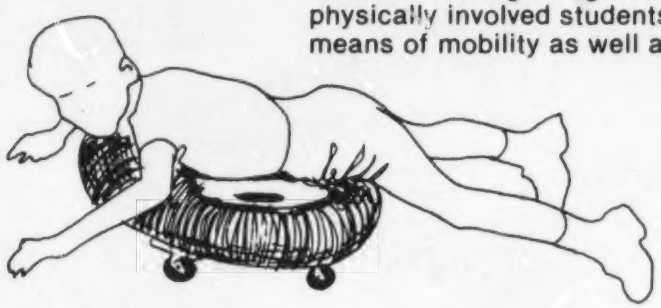


Prone Standers: A prone stander is a relatively expensive piece of equipment, but for many physically involved students, it affords the best or only way to get them upright to improve visual attention and head and trunk control and enhance fine motor ability. These standers are more versatile than standing tables because the student can be positioned at various angles and can be placed at different surfaces for working. Prone standers are available from many manufacturers or can be homemade. Plans for prone standers are included in several of the books which describe how to make equipment.

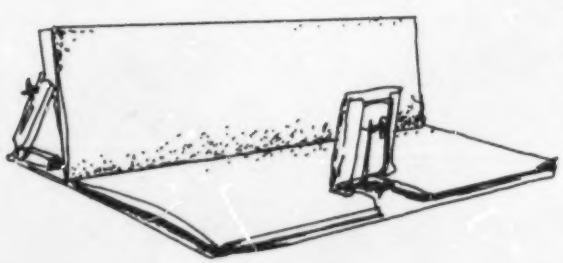
Sandbags and Pillows: Whether homemade or commercially made, these are invaluable for positioning physically involved students. They can be made or bought in a variety of sizes and shapes to suit different purposes.



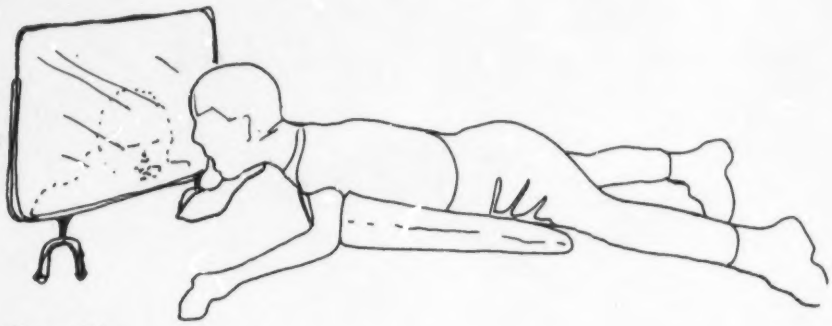
Scooter Boards: These can be used for various gross motor and perceptual motor activities. They are available from many suppliers including Sammons, and Preston or can be homemade. If you are making a scooter board, be sure to use good casters that swivel in all directions (universal casters). A piece of fuzzy carpet attached to the top of the board provides additional tactile input. Scooter boards can also be made in a variety of sizes, from small squares for students with good gross motor abilities to long, full-body ones for very physically involved students. In the latter case, these can often be used as a means of mobility as well as providing a therapeutic position.



Side-Lyers: Side-lying is often the most effective position for fine motor activities for very physically handicapped students. A side-lyer is a long piece of wood attached to a wooden base with two or three straps or pads attached to it. A student can be placed with his or her back against the side-lyer with straps or pads across the chest. The hands are then left free for fine motor activities. Available from Community Playthings.

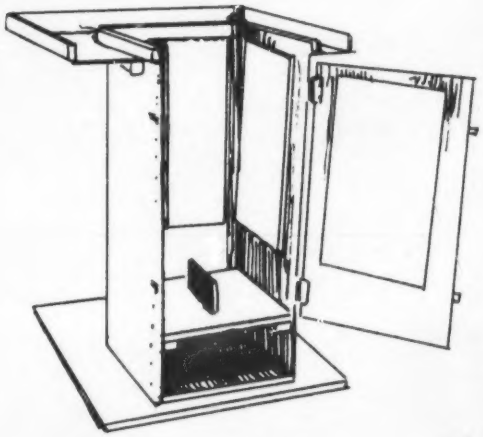


Speech Mirrors: Beckley Cardy's speech mirror has an unbreakable mirror on one side and a flannel board on the other. It is a very helpful piece of equipment for working with a student on a mat—it provides visual feedback on the mirror side and a space for maintaining the student's attention with flannel board activities on the other side.

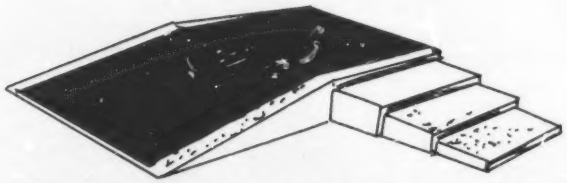


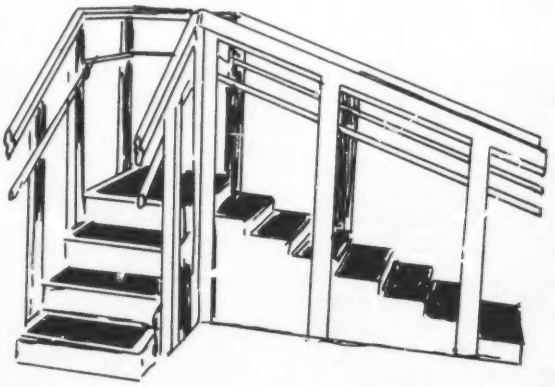
Standing (Full-Length) Mirrors: The standing mirror is an important piece of equipment for giving visual feedback both to the student and the individual working with him or her. It can be used upright or on its side for students on a mat. Caution: If there is a danger of a mirror being tipped over, you may want to have a wall-mounted one.

Standing Tables: These wooden box-like tables allow a child who cannot stand independently to stand supported and do table work. They are available from manufacturers for one, two, or four children. They can also be homemade but are slightly more difficult to construct than prone standers. Look for standing tables that are adjustable for students of different sizes. A standing table is a valuable piece of equipment for a teacher who has physically involved students in the classroom, although it is bulky and can take up a considerable amount of space.

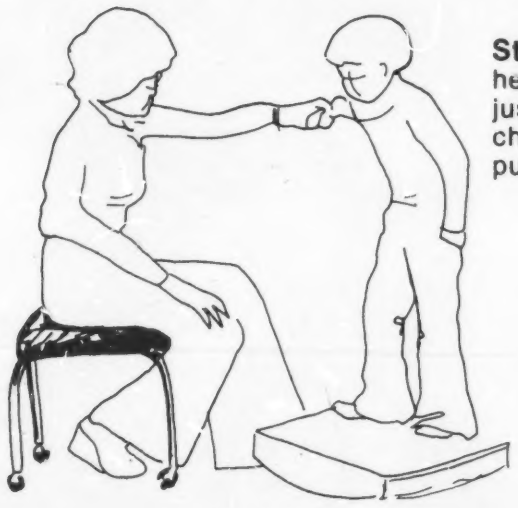


Steps, Curbs, and Ramps: Having a ramp and a





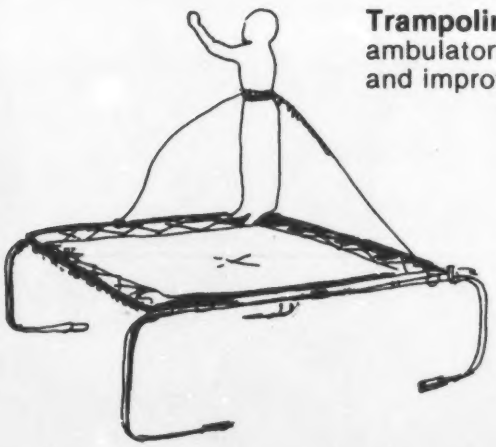
set of graduated steps in a gross motor area is helpful for students just learning how to negotiate stairs. Ramps can also be used for scooter board or rolling activities. Available from Preston.



Stools on Wheels: A small stool on wheels is very helpful in working with young children, particularly those just learning how to walk. It is easier to work with a child on his or her level than to have to bend over and put stress on your back. Available from Preston.

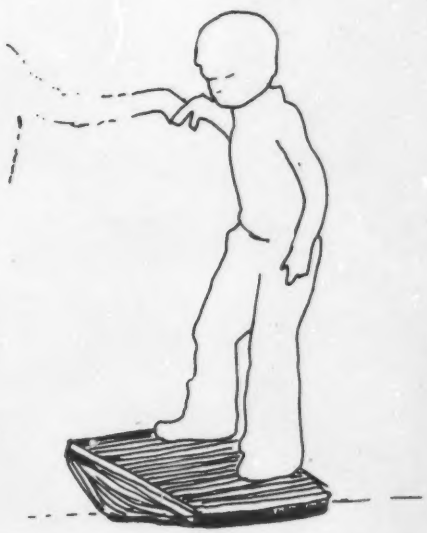
Swinging Platforms: A carpeted platform suspended from the ceiling provides vestibular stimulation and improves balance. Available from Sammons or Community Playthings or can be homemade.

Tilt-Top School Desks: Many physically involved students find it easier to work if their work surface is moved off the horizontal slightly and into a vertical plane. Preston has an adjustable tilt-top desk available. Adaptations to achieve this position can also be made in the classroom with the use of an easel.



Trampolines: These are lots of fun for all students, even non-ambulatory ones. They give vestibular stimulation and sensory input and improve weight bearing.

Vestibular Boards: A vestibular board is a rocking platform that stimulates equilibrium responses while providing controlled vestibular input. If rocked slowly, vestibular boards can also aid in-relaxation. These can be large enough for a child to lie on or small to improve sitting, kneeling, and standing balance. They can easily be made out of wood and covered with carpet or they can be ordered from several manufacturers. Sammons has a rocking platform that moves in all directions.



Wedges: A firm foam wedge covered by naugahyde or vinyl helps maintain a prone-on-elbows position, helping to improve visual skills as well as head and trunk control. It can be used for positioning, particularly helping to drain the lungs of excess mucus. This is especially important for severely involved students who cannot move around or change positions on their own. Wedges also provide good positions for more functional hand use. They can be easily made in various sizes or can be obtained from several manufacturers.

GUIDELINES FOR USE AND SELECTION OF WHEELCHAIRS

For some physically handicapped students, a wheelchair or other conveyance may well be the most important piece of adaptive equipment. A properly fitted/adapted wheelchair can provide:

- a means of safe transportation
- a means for maintaining a good position for classroom activities to increase function and prevent deformity
- a means for the student to interact with his peers and the environment
- a means of mobility for the non-ambulatory student

The prime objective in selecting a wheelchair for a child should be, "Fit the wheelchair to the child, not the child to the wheelchair."

Selecting a Wheelchair

There are many different types of wheelchairs, from very elaborate, expensive systems for full body support to fairly simple strollers. There are many factors to consider when deciding on a wheelchair, as described below.

Cost: A lightweight large-size stroller may cost slightly more than $100, while a custom-made support system may cost close to $1,000. If funding is unavailable or is limited, then it becomes important to consider which characteristics of the chair are essential, which might be eliminated, and which could be fabricated by a physical or occupational therapist, thus decreasing the cost.

Age and Size of Child: The older and larger the child, the more essential it is to have a conveyance of some type, for both safety and positioning and to provide a more normal relationship for the child with the environment. For young, small children without extreme deformities, it is much easier to adapt readily available seats and chairs. As the child becomes older, he or she will generally spend more time in a wheelchair, which will usually be more elaborate and custom-fit. This does not mean that you should select a chair that is too large with the idea that the child will grow into it; good fit at all times is crucial.

Purpose: The considerations in selecting a wheelchair for a child who will be in it for most of the day's activities will necessarily be different from those for a child who needs a chair purely for transportation to and from school. However, all elements of a child's day should be considered. If he or she is transported on a bus, will the chair fit? Can it be securely locked into place or tied down? Is it collapsible enough to fit in a car if necessary? Many of the very elaborate chairs that provide excellent support are impractical for the family who likes to take their child on outings, because it will not fit in their car. Conversely, chairs that convert to car seats become even more desirable for some families.

Function: The best wheelchair for any child is one that will maintain the child comfortably in a well-aligned position and will enhance functioning ability. Several very good chairs currently available are not constructed to allow the child sitting in the chair to be able to push it himself or herself. While it is true that many children who will need this type of chair will be significantly physically handicapped and will not be able to propel themselves, there are some very physically involved students who have both the physical and cognitive ability along with the desire to be able to independently maneuver their chair. It is important to weigh the possible loss of function against other factors in selecting a chair.

Homemade vs. Commercially Available: It has already been mentioned that some adaptations to chairs can be made by physical and occupational therapists at a much lower cost than those available commercially. Homemade adaptations also have the advantage of being more custom-tailored for children who are difficult to fit because of deformities or unusual proportions. However, it is sometimes difficult to find a person capable of making the necessary adaptations, and it is also extremely time-consuming.

Safety and Durability: The wheelchair should be sturdy, durable, and easy to maintain. The materials used in the chair, both the manufactured and the homemade chair, should be easy to clean, particularly if the child is not bowel- and bladder-trained or if he or she will eat meals in the chair. Wheelchairs that are around other children need to be especially sturdy so they will not tip over if bumped into. SAFETY BELTS MUST BE INCLUDED ON ALL CHAIRS.

Lapboard: The lapboard is a wooden or plastic tray placed over the arms of a wheelchair, with multiple purposes. Among these: it may help a child sit upright by providing extra stability; it can be used for fine motor activities, feeding, or communication. A lapboard can be homemade or commercially made, and is a good addition to most chairs.

Considerations in Positioning a Child in a Wheelchair

1. No child should be in a wheelchair for a prolonged period of time. Almost all people shift their position at least every twenty minutes to relieve pressure. A handicapped child in a wheelchair may not be able to do this, and so you have to do it for him or her. A child should be removed from a chair periodically and positioned in alternative ways or given a chance to move around. This may help prevent skin breakdown and deformities while providing for movement experiences.

2. Heavy students should not be carried from place to place but need to be transported in a wheelchair or other conveyance. This is for both their own safety and the safety of those transporting them.

3. If the child has poor head control, some type of adaptation must be provided for head support. For ideas see *Selected Equipment for Pediatric Rehabilitation* by Adrienne Bergen and *Functional Aids for the Multiply Handicapped* by Isobel Robinault. Head stability is important for visual attention, feeding, communication, and fine motor activities.

4. To prevent the development of a scoliosis or the worsening of an already existing one, make sure the child is seated squarely on both buttocks with the trunk upright and not leaning to either side. Use extra supports such as pillows and cushions if necessary.

5. Arms should be supported either by armrests or a lapboard so that shoulders are as level as possible.

6. The seat depth should be adjusted so there is approximately 1″ between the front edge of the seat and the bend of the student's knees. Hips should be at a 90° angle, although more hip flexion may be necessary to maintain a good position for some students.

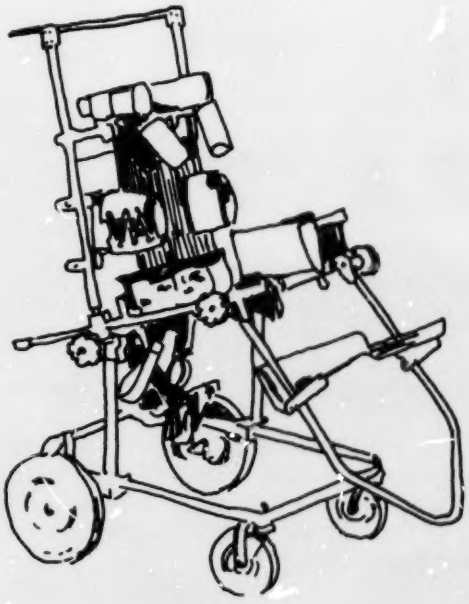
7. Feet should be resting on a solid base of support.

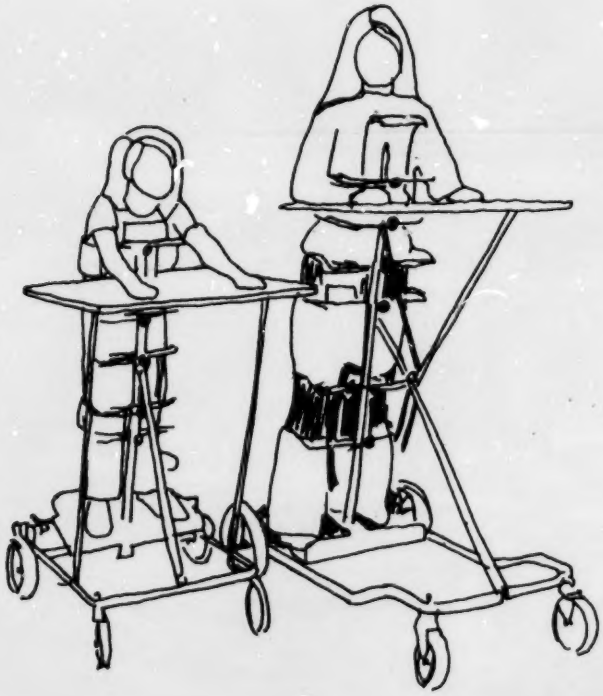
Specialized Wheelchairs

There are several types of wheelchairs that are relatively new but have been used very successfully with severely physically involved students. Most are available from local hospital/medical supply stores.

Mulholland Chair: The Mulholland Company produces prone standers as well as wheelchairs. Both pieces of equipment are relatively expensive but are very adjustable. The prone standers are particularly useful. The chairs are designed to "help control primitive reflex patterns, decrease muscular imbalance, improve the child's self-image, and increase independence, mobility, alertness and hand/arm use." They come in three sizes: child traveler (designed to also be used as a car seat), youth, and junior adult. One disadvantage is that the child cannot propel the wheelchair unless he or she is using the battery-powered model. Some people may also feel slightly intimidated by these somewhat "mechanical" looking chairs.

For further information:
Mulholland Growth Guidance Equipment
1563 Los Angeles Avenue
Ventura, CA 93003
(805) 647-5527





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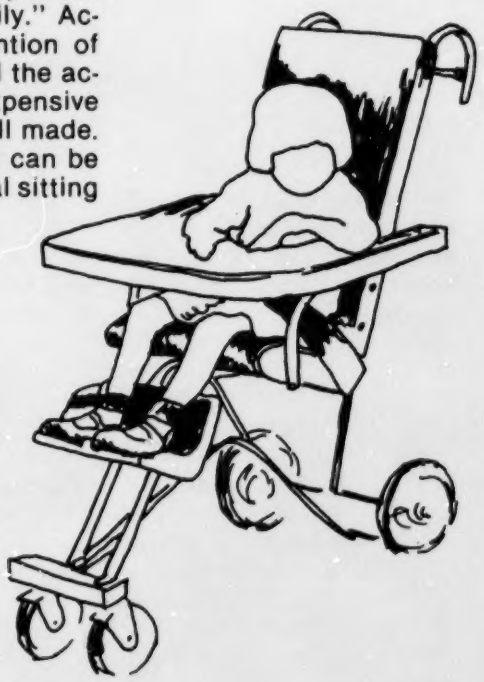
Ortho-Kinetic Travel Chair: This is an "adaptive wheelchair that provides proper positioning, support, and comfort for the handicapped child." "It is designed to function as both stroller and carseat to provide greater freedom and mobility for both the child and the family." Accessories for head support, abduction of knees, and prevention of scoliosis are available. The basic chair is fairly expensive, and the accessories add considerably to the price. There are some less expensive versions manufactured by competitors, but they are not as well made. One disadvantage is that the larger size is not as stable and can be tipped over. Also, this chair cannot be propelled by the individual sitting in it.

For further information:
Ortho-Kinetics, Inc.
1610 Pearl Street
Boc 436
Waukesha, WI 53186
(800) 558-2151



Pogon Buggy: (Also known as the Maclaren Buggy)—This is a large, inexpensive, lightweight, extremely portable stroller that many parents have found very convenient. It can be used for children from approximately four year olds to those weighing 125 pounds. Important attachments to the buggy are foot pedals. Some therapists have found that using hard removable back and seat inserts improves posture. This chair should be used primarily for transportation and not as a child's main adapted chair. It is available from local hospital/medical supply stores.

Hogg Chair: This is a relatively inexpensive chair that provides a good way to transport some non-ambulatory students. It should be used only for transportation and not as a permanent adapted chair. It may not be sufficient for transporting some severely physically involved students as it provides minimal support. Available from Preston and local hospital/medical supply houses.

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Routine Care of Wheelchairs

The following information is taken from the publicaton: *Wheelchair Selection: More Than Choosing a Chair with Wheels*

Persons who must be responsible for the maintenance of wheelchairs will find that the local bicycle repair shop is a good resource for day-to-day help. The wheelchair dealer will have to provide replacement parts, special repairs, or adiustments.
Following are recommendations for a routine maintenance of wheelchairs.

KEEP THE WHEELCHAIR CLEAN

Clean upholstery frequently with a damp cloth, or wash it with miid soap and water, and dry it thoroughly. Remove lint and dirt from wheels, especially casters, as necessary. Wipe metal parts with a clean dry cloth about once a month. A light wax can be applied for protection. If telescoping parts such as removable arms tend to bind, rub them with paraffin.

KEEP THE WHEELCHAIR DRY

Wipe the wheelchair dry whenever it gets wet. Special attention should be paid to telescoping parts which can rust.

PROTECT THE WHEELCHAIR FROM EXTREMES IN TEMPERATURE

Abrupt changes in temperature are particularly hard on the upholstery, causing it to crack and feather. To aid in preventing the upholstery from splitting when exposure to temperature changes cannot be avoided:

Open the wheelchair carefully when it is cold.

Wipe the chair dry immediately when moisture appears on it after it is moved from a cold to a warm area.

REPAIR ANY LOOSE OR BROKEN PARTS IMMEDIATELY

Prompt attention to any needed repairs will reduce overall maintenance problems and costs. For example, a loose spoke on the wheel tends to loosen adjacent ones and soon several will need to be replaced or repaired.

MAINTAIN ADEQUATE LUBRICATION

Establish a regular schedule for lubrication according to the manufacturer's recommendations.

* * * * * * * * *

For more specific information on wheelchair maintenance see:
Wheelchair Care and Service
Wheelchair Scheduled Maintenance Program

Order from:
Everest and Jennings
1803 Pontius Avenue
Los Angeles, CA 90025

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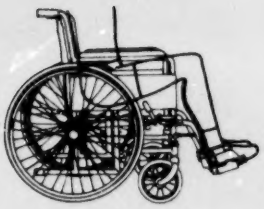
The following information is courtesy of Medical Equipment Distributors, Inc.

Common Results of Improperly Fitted Wheelchairs

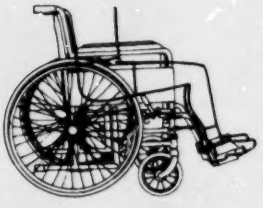


Footrests too high

With footrests that are too high, the child's knees are forced up and weight is not born on the back of the thighs. This throws the body weight on the ischium and may cause pressure sores.

Footrests too low

With footrests that are too low, the child's foot is not firmly supported and the foot tends to point downward. rather than resting at a 90° angle to the leg. With time, plantar flexion or "drop foot" develops.

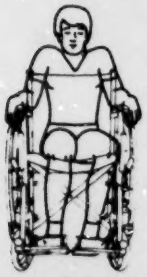


Seat too shallow

If the seat of the chair is too shallow for the child, the first problem is minimal weight distribution which places excessive pressure on the ischium. Seating balance is lessened and the child's legs are forced into improper relationship with the footrests. Further, the child will quickly outgrow the chair.

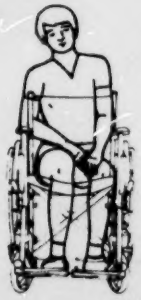
Seat too deep

A seat that is deeper than the distance from the child's hips to his knee will either cause him to sit with his legs extended or to slide forward in the chair. The latter may cause Kyposis. In some cases, a back cushion is used to create correct seat depth. Cushion thickness is reduced as the child grows. Care must be taken not to move the child too far forward to reach handrims.



Arms too high

Arm height that is too high forces the child's shoulders up as he leans on the arms for support. This creates an unnatural position and restricts range of motion necessary to propel the chair.

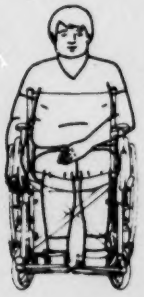


Arms too low

If the arms of the chair are too low, the child tends to lean to one side or forward for support. Either habit may cause spine curvature.

Seat too wide

The child that is in a chair that is too wide for him tends to develop the habit of leaning to one side or the other. This promotes formation of a scoliosis.



Seat too narrow

A seat that is too narrow for the child's breadth restricts his movement in the seat and does not allow him to readily change positions. A seat that is too narrow also makes it difficult for the child to get in or out of his chair, does not permit wearing a coat and is quickly outgrown.

Back too low

A back that is too low does not give the child proper support. If he leans back, he may catch his scapula over the top of the back or lose his balance.

Back too high

Back height that extends above the child's shoulder restricts his arm movement in propelling the chair. This back height also tends to push the child's head forward as he leans back.

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BOOKS AND CATALOGS

Books on Equipment

These books will give you further ideas about what is available in the field of adaptive equipment and how you can make equipment yourself.

Developmental Physical Management for the Multi-Disabled Child
Beverly Buttram, OTR and Glenna Brown, M.A.
Order from:
Dr. Loreta Holder
The University of Alabama
Area of Special Education
P.O. Box 2592
University, Alabama 35486

Feeding the Handicapped Child
Mary Ann Harvey Smith, Ed.
Child Development Center
Dept. of Nutrition
711 Jefferson Avenue
Memphis, Tennessee 38105

Functional Aids for the Multiply Handicapped
Isabel P. Robinault
Order from:
Harper and Row, Publishers
10 E. 53 Street
New York, New York 10022

Handling the Young Cerebral Palsied Child at Home
Nancie R. Finnie
Order from:
E.P. Dutton and Co., Inc.
2 Park Avenue
New York, New York 10003

How to Build Special Furniture and Equipment for Handicapped Children
Ruth B. Hoffman, OTR
Order from:
Charles C. Thomas, Publisher
301-327 East Lawrence Avenue
Springfield, Illinois 62703

Program Guide for Infants and Toddlers with Neuromotor and Other Developmental Disabilities
Frances P. Connor, G. Gordon Williamson and John M. Siepp
Order from:
Teachers College Press
Columbia University
1234 Amsterdam Avenue
New York, New York 10027

Selected Equipment for Pediatric Rehabilitation
Compiled by Adrienne Bergen, RPT
Order from:
Blythedale Children's Hospital
Broadhurst Avenue
Valhalla, New York 10595

Therapeutic Positioning Equipment for the Multiply Handicapped—
A Neurodevelopmental Approach to its Design and Development
Maryana B. Baez, LPT
Order from:
Paul Adamovich, COTA
42 Elmwood Road
Frankfort, New York 13340

Treatment of Cerebral Palsy and Motor Delay
Sophie Levitt
Order from:
J.B. Lippincott Co., Publishers
Rittenhouse Square
Philadelphia, Pennsylvania 19107

Beyond Survival, Parts I, II, III
A three-part slide-tape series that deals with the developmental stages of feeding as well as feeding problems, remedial techniques and adaptive equipment (Part II).
Order from:
Meyer Children's Rehabilitation Institute
Media Resource Center
University of Nebraska Medical Center
Omaha, Nebraska 68131
(402) 541-7667

Manufacturer's Catalogs

Many manufacturers and equipment suppliers will provide catalogs upon request. The following list of manufacturers includes just some of the suppliers who furnish adaptive equipment for handicapped children.

Achievement Products, Inc.
P.O. Box 547
Mineola, New York 11501
Carries wedges, bolsters, mirrors, strollers, etc.

Adaptive Therapeutic Systems, Inc.
683 Boston Post Road
Madison, Connecticut 06443
Manufactures prone boards, self-feeding systems, lap boards, safety harnesses, wheelchairs, etc.

Beckly-Cardy Co.
1900 N. Narragansett
Chicago, Illinois 60639
(312) 622-5420
Carries mostly educational supplies but their educubes and speech mirror are among some of their therapeutic equipment.

Be OK Self Help Aids
Fred Sammons, inc.
Box 32
Brookfield, Illinois 60513
(800) 323-7305
Another large and popular company that deals particularly with self-help aids.

Community Playthings
Rifton, New York 12471
Has particularly well-made adapted chairs, bolsters, wedges, prone boards and adapted tricycles as well as typical play equipment.

Equipment Shop
P.O. Box 33
Bedford, Massachusetts 01730
(617) 275-7681
Carries adapted tricycles, therapy balls, prone standers, etc.

Everest and Jennings, Inc.
1803 Pontius Avenue
Los Angeles, California 90025
One of the largest manufacturers of wheelchairs. The chairs are usually readily available from local hospital/medical supply houses.

Kaye Products, Inc.
202 South Elm Street
Durham, North Carolina 27701
(919) 688-1601
Prone standers, corner chairs, bolster chairs, adapted strollers, seat inserts. Chairs are well-made and reasonably priced.

MED (Medical Equipment Distributors)
1701 First Street
Maywood, Illinois 60153
(312) 681-2828
This is the main office for this distributor of wheelchairs and other equipment for special children. They have approximately 35 distributors in the United States.

J.A. Preston Corporation
71 Fifth Avenue
New York, New York 10003
A very large company that has virtually every type of equipment. Areas of equipment listed in a recent catalog include:

assessment and training materials
cognitive skills
self-help aids and social perception (including some feeding equipment)
perceptual motor activities
sensory perception
neuromuscular development
therapeutic recreation
furniture and equipment for handicapped children

Self-Start Manufacturing Company
167 O'Brien Highway
P.O. Box 232
Cambridge, Massachusetts 02141
This company manufactures clothing that is specially tailored for children and adults with disabilities. The garments look like those purchased in any store but are made so that they can be put on and taken off with a minimum of effort.

Skill Development Equipment Company (SDE)
Box 6300
1340 N. Jefferson
Anaheim, California 92807
(714) 524-8750
A favorite among therapists and teachers for well-made, sturdy bolsters, wedges, large balls.

Note: Local hospital/medical supply houses carry many different types of equipment and are generally a good source of information.

Publications on Wheelchairs

"Maintenance and Minor Repairs of the Wheelchair"
E.F. Cicenia and others
American Journal of Physical Medicine 35-206-217 (August) 1956.

Rehabilitation 1966, pp. 431-443.
F.M. Krusen and others, Editors
Order from:
W.B. Saunders Company
Philadelphia, Pennsylvania 19107

The Wheelchair Book
H. Kamentz
Order from:
Charles C. Thomas, Publishers
301-327 East Lawrence Avenue
Springfield, Illinois 62703

Wheelchair Care and Service—Wheelchair Scheduled Maintenance Program
Order from:
Everest and Jennings
1803 Pontius Avenue
Los Angeles, California 90025

Wheelchair Selection: More Than Choosing a Chair with Wheels
Rehabilitation Publication #713
Order from:
American Rehabilitation Foundation
1800 Chicago Avenue
Minneapolis, Minnesota 55404